

## **Chapter 4**

### **Use of Personal Identification Number (PIN)**

Prior to initiating any EBT transaction, the cardholder must enter the correct personal identification number (PIN) on the EBT terminal's keypad. If an incorrect or invalid PIN is entered, the system will reject the transaction. If an invalid PIN is entered consecutively a specified number of times, the EBT system will "lock out" the EBT card for any further attempts until the food stamp recipient goes to his or her local food stamp office to enter the correct PIN or select a new one.

EBT food stamp regulations specify that:

The State agency shall permit food stamp households to select their Personal Identification Number (PIN). PIN assignment procedures shall not be permitted.<sup>23</sup>

Food stamp recipients usually select their PINs at the food stamp office during card issuance procedures. Currently, however, 26 States have received a waiver to the PIN selection regulation. In these States, the EBT vendor assigns a PIN to the recipient; a mailer is normally used to notify the recipient of the PIN.

States and EBT vendors vary in their rules governing the length and format of the PIN. All four States in this study, however, use the same rule. Whether selected by the recipient or assigned by the system, PINs are four digits long. This consistency in PIN length facilitates interpretation of cross-State comparisons of PIN-related problems. The primary difference among the States is whether the PIN is selected by the recipient at card issuance or assigned by the EBT system, with a notice mailed to the recipient.

The primary question for the study is whether the PIN selection waiver affects recipients' use of their EBT cards, especially as they attempt to purchase groceries using their food stamp benefits. Secondary questions include whether any PIN-use problems, if they exist, are temporary or persistent and whether the PIN selection waiver has a greater impact on vulnerable than on nonvulnerable recipients.

### **Highlights**

The results from the Survey of New EBT Users show consistent evidence that new food stamp recipients in the waiver States of Alabama and Minnesota experience more PIN-related problems than new recipients in the nonwaiver States of Louisiana and Pennsylvania. New recipients in the waiver States are more likely to have had problems remembering their PINs, to have entered a wrong PIN at the start of an EBT transaction, and to have had a PIN problem that prevented card use. The waiver State recipients are also more likely to have requested a new PIN.

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<sup>23</sup>CFR 274.12(g)(5)(i).

Generally, the findings with respect to PIN-related problems hold true for both vulnerable and nonvulnerable food stamp recipients. That is, new food stamp recipients in the two waiver States experience more PIN-related problems than new recipients in the nonwaiver States, regardless of whether they are disabled or elderly or neither. Although vulnerable recipients are more likely to experience some PIN-related problems, the pattern is not consistent across multiple measures of PIN problems. The evidence is much stronger that waivers to the Federal regulation requiring PIN selection have more of a negative impact on remembering one's PIN than do age and disability status.

PIN-related problems are not restricted to new food stamp recipients. Even within the existing caseload, large percentages of recipients enter invalid PINs at least occasionally. Although this suggests that many invalid PIN entries are simple key-entry mistakes rather than indicators of memory lapses, new recipients are more likely than existing recipients to have PIN-related problems. Thus, there is some evidence for a learning effect.

New food stamp recipients in the waiver States are more likely than those in the nonwaiver States to either write their PIN down or tell it to somebody who can help them remember it at a later date. Vulnerable recipients are also more likely than nonvulnerable recipients to do so. This security lapse appears to be correlated with unauthorized use of the EBT card. Of seven new food stamp recipients who said that somebody had used their EBT cards without permission, six were from a waiver State. Of the seven recipients, six responded to the questions about writing down one's PIN or telling it to somebody, and five of the six said they had done one or both. Although the total number of recipients who apparently experienced an unauthorized transaction is very small, it appears that the PIN selection waiver (or the hands-on training waiver) may have contributed to an increased security risk.

Difficulties with PIN use, however, do not appear to affect recipients' satisfaction with their EBT cards. When asked how satisfied they were, from 78.3 to 85.7 percent of new food stamp recipients in each State said they were "very satisfied." Large majorities of both vulnerable and nonvulnerable recipients gave the same reply. Generally, recipients from the waiver States were as satisfied with using their EBT card as recipients from the nonwaiver States. Among vulnerable recipients, however, those from the waiver States were somewhat less likely to be very satisfied (but more likely to be "somewhat satisfied") than vulnerable recipients from the nonwaiver States. These responses are all the more informative because the question about card satisfaction was asked near the end of each interview, after recipients had answered questions about problems with their PIN or EBT system use. Even after having their attention directed toward recent problems, recipients expressed a great deal of satisfaction with their EBT cards.

## General System Use and Satisfaction

Before questioning food stamp recipients about possible problems with use of their EBT cards, the survey asked how often, on average, they used their cards at food stores. Table 30 shows their responses. A majority of recipients and alternate shoppers in each State said they use the EBT card more than once a month, but less than once a week. From 36 to 39 percent, depending on the State, said they shop at least weekly, and 8 to 9 percent said they shop less than once a month with the EBT card. The similarity in the distributions is striking; chi-squared tests indicate no significant differences among the States in the frequency of EBT card use.

**Table 30—New entrants’ frequency of card use**

Frequency	Total waiver	Total non-waiver	Waiver States		Nonwaiver States	
			Alabama	Minnesota	Louisiana	Pennsylvania
<i>Percent</i>						
At least once a week	37.7	37.5	38.0	37.3	36.3	38.6
More than once a month, but less than once a week	53.2	54.0	53.4	53.0	55.6	52.5
Less than one a month	9.1	8.5	8.6	9.7	8.1	8.9
<i>Number</i>						
Sample size	873	741	538	335	385	356

Notes: Table entries are based on responses to Question E1 of the Survey of New EBT Users. Chi-squared tests show no significant differences between waiver and nonwaiver State distributions of frequency of card use. Similarly, there are no significant differences between the Alabama and Minnesota distributions or the Louisiana and Pennsylvania distributions.

In the average number of approved food stamp purchases per month, however, differences among the four States do emerge. From detailed EBT transaction data, and as shown in table 31, new food stamp recipients in the waiver States averaged 6.1 food stamp purchases per month during November and December 1999, compared with an average of 7.0 purchases in the nonwaiver States. Both new and existing food stamp cases in Louisiana shopped more often with the EBT card than their counterparts in the other three States, perhaps partly because Louisiana—among the four States—has the highest average monthly food stamp benefit level. Minnesota

**Table 31—Mean number of approved food stamp purchases per month**

Recipient group	Total waiver	Total non-waiver	Waiver States		Nonwaiver States	
			Alabama	Minnesota	Louisiana	Pennsylvania
<i>Mean number</i>						
All new entrants	6.1	7.0	7.3	4.8	8.9	5.2
Vulnerable new entrants	4.2	4.9	5.3	3.1	5.9	3.9
Nonvulnerable new entrants	6.5	7.4	7.9	5.0	9.3	5.4
Existing cases	6.5	7.7	7.1	5.9	8.4	6.9
Vulnerable existing cases	4.1	5.1	4.7	3.6	5.5	4.7
Nonvulnerable existing cases	8.1	9.4	9.0	7.3	10.2	8.5
<i>Number</i>						
Total EBT accounts	257,462	603,639	169,245	88,217	216,578	387,061

Notes: Table entries are based on EBT transaction data from November and December 1999. “Vulnerable” cases are here defined as elderly recipients or those listed on State eligibility files as having a disability. The total numbers of EBT accounts exceed the food stamp caseloads presented in table 14 (chapter 2) because the EBT data cover 2 months. No significance tests were performed because the data do not represent a sample.

recipients shopped least often during the month. For both new and existing cases, nonvulnerable recipients shopped more often with their EBT card during the month than vulnerable recipients.<sup>24</sup>

The EBT transaction data in table 31 do not necessarily disagree with the survey results in table 30. For instance, the survey response “at least once a week” can mask a lot of the variation in the actual number of times an EBT card is used during the week.

The survey asked new food stamp recipients from each State how satisfied they were with their EBT cards. Tables 32 through 34 show the responses for all recipients, vulnerable recipients, and nonvulnerable recipients, respectively. Recipients were generally very satisfied with their EBT cards. In the waiver States, 79.7 percent of all new recipients (table 32) said they were “very satisfied” and 15.9 percent said they were “somewhat satisfied,” for a total of 95.6 percent who were satisfied. In the nonwaiver States, 83.5 percent said they were “very satisfied” and 12.4 percent said they were “somewhat satisfied,” for a total of 95.9 percent who expressed satisfaction. A chi-squared test shows no significant difference in the waiver vs. nonwaiver distributions. In addition, there were no significant differences in the State-to-State comparisons.

**Table 32—All new entrants’ satisfaction with their EBT cards**

Response	Total waiver	Total nonwaiver	Waiver States		Nonwaiver States	
			Alabama	Minnesota	Louisiana	Pennsylvania
			<i>Percent</i>			
Very satisfied	79.7	83.5	81.1	78.3	85.7	81.3
Somewhat satisfied	15.9	12.4	15.5	16.4	11.8	13.0
Neither satisfied nor dissatisfied	1.6	1.5	1.0	2.3	0	3.0
Somewhat dissatisfied	1.6	1.2	.9	2.3	1.5	1.0
Very dissatisfied	1.2	1.4	1.6	.7	1.0	1.7
			<i>Number</i>			
Sample size	875	745	540	335	384	361

Notes: Table entries are based on responses to Question E7 of the Survey of New EBT Users. Percentages may not sum to 100.0 due to rounding. Chi-squared tests show no significant differences between the waiver State and nonwaiver State distributions of recipients’ satisfaction with their EBT cards. Similarly, there are no significant differences between the Alabama and Minnesota distributions or the Louisiana and Pennsylvania distributions.

Table 33 presents the satisfaction responses for vulnerable new food stamp recipients. Again, satisfaction with EBT card use is high in all four States. Chi-squared tests show no significant differences between the Alabama and Minnesota distributions or the Louisiana and Pennsylvania distributions.

<sup>24</sup>No significance tests were performed for table 31 (or later exhibits based on EBT transaction data) because the results are not based on a sample of recipients or transactions. Rather, the EBT data represent all transactions initiated during the 2-month period. In this sense, all differences in table 31 are “statistically significant,” although they may not be large enough to have policy implications.

**Table 33—Vulnerable new entrants’ satisfaction with their EBT cards**

Response	Total waiver	Total nonwaiver	Waiver States		Nonwaiver States	
			Alabama	Minnesota	Louisiana	Pennsylvania
<i>Percent</i>						
Very satisfied	73.3	88.1	78.3	68.3	93.1	83.2
Somewhat satisfied	21.6	7.9	17.2	26.0	4.5	11.3
Neither satisfied nor dissatisfied	2.4	.2	2.9	1.8	0	.5
Somewhat dissatisfied	.8	.4	0	1.5	.4	.4
Very dissatisfied	2.0	3.4	1.6	2.3	2.1	4.7
<i>Number</i>						
Sample size	252	268	185	67	131	137

Notes: Table entries are based on responses to Question E7 of the Survey of New EBT Users. Percentages may not sum to 100.0 due to rounding. Chi-squared tests show a significant difference (at the .05 level) between the waiver State and nonwaiver State distributions of recipients’ satisfaction with their EBT cards. There are no significant differences between the Alabama and Minnesota distributions or the Louisiana and Pennsylvania distributions.

When the total waiver State and nonwaiver State distributions are compared, however, a chi-squared test shows the distributions to be different at the 0.05 level. That is, vulnerable recipients in the waiver States are less likely to be “very satisfied,” and more likely to be “somewhat satisfied,” than vulnerable recipients in the nonwaiver States. Even so, nearly 95 percent of vulnerable recipients in the two waiver States said they were satisfied with use of their EBT cards.

When the responses of nonvulnerable recipients are examined (table 34), about 95 percent of recipients in each State indicate satisfaction with the EBT card. There are no significant differences in the distributions between States or between the waiver and nonwaiver groups.

**Table 34—Nonvulnerable new entrants’ satisfaction with their EBT cards**

Response	Total waiver	Total nonwaiver	Waiver States		Nonwaiver States	
			Alabama	Minnesota	Louisiana	Pennsylvania
<i>Percent</i>						
Very satisfied	81.2	82.7	81.8	80.7	84.5	80.9
Somewhat satisfied	14.6	13.2	15.1	14.2	13.0	13.4
Neither satisfied nor dissatisfied	1.4	1.8	.5	2.4	0	3.6
Very dissatisfied	1.0	.9	1.6	.4	.8	1.0
<i>Number</i>						
Sample size	623	477	355	268	253	224

Notes: Table entries are based on responses to Question E7 of the Survey of New EBT Users. Percentages may not sum to 100.0 due to rounding. Chi-squared tests show no significant differences between the waiver and nonwaiver State distributions of recipients’ satisfaction with their EBT cards. Similarly, there are no significant differences between the Alabama and Minnesota distributions or the Louisiana and Pennsylvania distributions.

Finally, a comparison of results from tables 33 and 34 suggests that nonvulnerable recipients are somewhat more satisfied with the EBT card than vulnerable recipients in Alabama and Minnesota, but that they are somewhat less satisfied than vulnerable recipients in Louisiana and Pennsylvania.<sup>25</sup> This may correlate with evidence presented later in this chapter and the next that

<sup>25</sup> A chi-squared test indicates that the Louisiana distributions are significantly different at the 0.05 level.

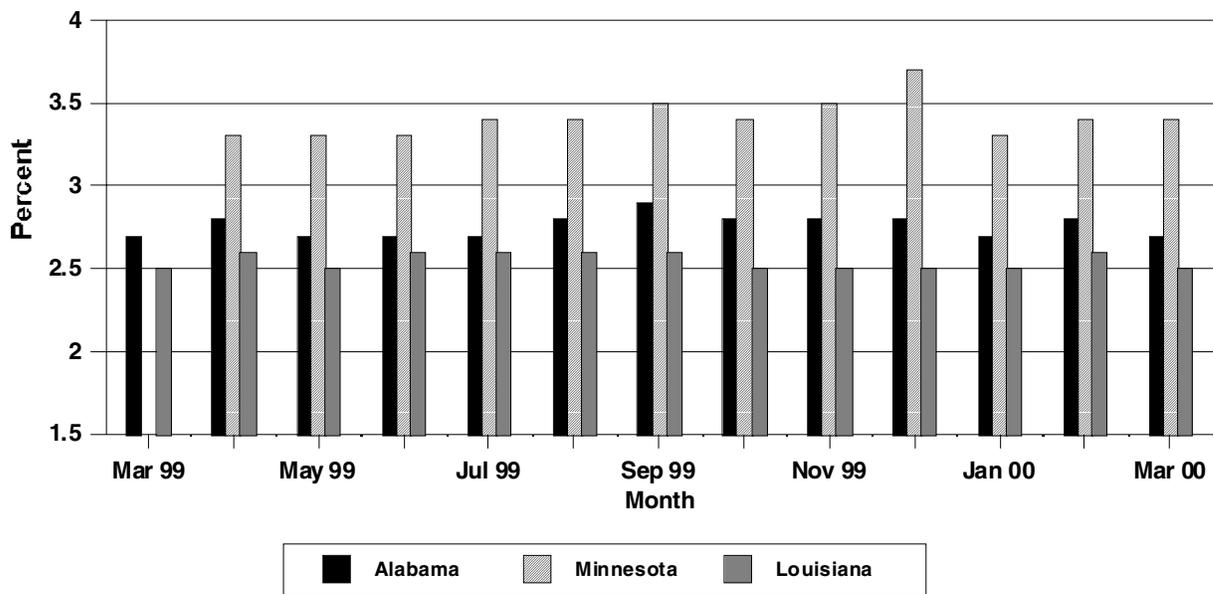
the waivers have a disproportionate effect on vulnerable recipients. Even if true, however, the level of satisfaction with the EBT card is high in all States and within both the vulnerable and nonvulnerable groups of recipients. This high level of satisfaction is all the more striking because recipients were asked about satisfaction near the end of the interview, after their attention had been drawn repeatedly to possible recent problems with using their EBT cards.

### Problems Remembering and Using One's PIN

The Survey of New EBT Users asked new food stamp recipients a series of questions about PIN use. This section looks at recipients' problems remembering their PINs or entering the correct PIN, as well as at problems preventing use of the EBT card and calls to customer service about PINs. As background for the survey results, figure 1 presents information from the monthly EBT summary reports on the relative prevalence of PIN problems in Alabama, Minnesota, and Louisiana. In these three States, the EBT systems reject from 2.5 to 3.7 percent of all transactions each month for entry of an invalid PIN. The rates of invalid PINs are highest in Minnesota.

The predominant feature of figure 1, however, is the relative constancy over time of the rate at which invalid PINs are entered for EBT transactions. Data on rejected POS transactions are not available for Pennsylvania, and they are missing for Minnesota in March 1999.

Figure 1  
**POS transactions rejected because of invalid PINs**



Data on rejected POS transactions are not available for Pennsylvania, and they are missing for Minnesota in March

The information in figure 1 has several limitations. First, the EBT summary statistics cannot be broken out by the age or disability status of recipients, so we cannot present separate rates for those who are vulnerable and nonvulnerable. Similarly, separate rates of invalid PIN transactions cannot be presented for new vs. existing cases, so we cannot address the question of whether

there is a learning curve for remembering and entering the correct PIN. Nevertheless, the data in figure 1 provide a context for information presented in the remainder of this chapter.

## Remembering the PIN

The survey asked recipients (or, in 29 cases, the alternative shopper) whether they had a problem remembering their PINs just after receiving their EBT cards and PINs. The top row of table 35 shows that an average of 11.6 percent of new recipients in the two waiver States of Alabama and Minnesota said they had problems remembering their PINs, compared with an average of 3.9 percent of new recipients in the nonwaiver States of Louisiana and Pennsylvania. The difference of 7.7 percentage points is relatively large and significantly different from zero at the 0.01 level.<sup>26</sup> In contrast, the differences between both the two waiver States and the two nonwaiver States were small and not statistically significant.

**Table 35—New entrants who had a problem remembering their PINs just after receiving their EBT cards**

Respondent group	Total waiver	Total non-waiver	Waiver States		Nonwaiver States	
			Alabama	Minnesota	Louisiana	Pennsylvania
All new entrants (percent)	11.6	3.9**	11.6	11.5	2.7	4.8
Sample size (number)	880	748	544	336	386	362
Vulnerable new entrants (percent)	21.5	8.9*	19.3	23.7	8.0	9.7
Sample size (number)	253	269	187	66	132	137
Nonvulnerable new entrants (percent)	9.2	2.7**	9.7	8.7	1.8	3.6
Sample size (number)	627	479	357	270	254	225

Note: Table entries are based on responses to Question D1 of the Survey of New EBT Users.

†Difference between this and the entry immediately to the left is significant at the 0.10 level.

\*Difference between this and the entry immediately to the left is significant at the 0.05 level.

\*\*Difference between this and the entry immediately to the left is significant at the 0.01 level.

Table 35 also breaks out responses separately for vulnerable and nonvulnerable food stamp recipients. The same pattern holds for each group as for the overall sample; new recipients in the waiver States, whether vulnerable or not, had more difficulties remembering their PINs than did new recipients in the nonwaiver States. Differences between each pair of waiver and nonwaiver States were smaller and not statistically significant.

<sup>26</sup>When two estimates in a table differ significantly, we place the significance marker only on the right-hand member of the pair (i.e., nonwaiver [vs. waiver], Minnesota [vs. Alabama], or Pennsylvania [vs. Louisiana]).

There is also evidence in table 35 that vulnerable recipients in the waiver States had more difficulties remembering their PINs than did nonvulnerable recipients in those same States. Across the two waiver States, 21.5 percent of vulnerable recipients reported problems remembering their PINs, compared with 9.2 percent of nonvulnerable recipients. The difference of 12.3 percentage points is statistically significant at the 0.01 level.<sup>27</sup> For Alabama, the 9.6 percentage point difference between vulnerable and nonvulnerable recipients is significant at the 0.05 level, and the 15.0 percentage point difference in Minnesota is significant at the 0.01 level. None of the corresponding differences in the nonwaiver States is significantly different from zero.

Table 35 therefore shows that new recipients in the waiver States had more difficulties remembering their PINs than did new recipients in the nonwaiver States, and that vulnerable new recipients in the waiver States had more difficulties than recipients in the waiver States who were neither elderly nor disabled. For this outcome measure, at least, the evidence points to the PIN selection waiver having a disproportionate impact on vulnerable recipients.

The last chapter noted that 45.8 percent of Minnesota respondents to the survey picked up their EBT cards at the local office. These recipients presumably were able to select their own PINs when they obtained their cards, so they may have been less likely to encounter PIN-related problems than their counterparts whose cards were mailed and PINs assigned. This is indeed the case. Table 35 shows that 11.5 percent of new entrants in Minnesota said they had a problem remembering their PINs just after receiving their EBT cards. Within the group of recipients who picked up their cards at the office, only 6.0 percent said they had difficulty remembering their PINs, compared with 17.9 percent of those recipients whose PIN was assigned. These figures are a reminder that Minnesota should be regarded as a “mixed” State with respect to implementing the customer service waivers.<sup>28</sup>

Finally, one hypothesis about PIN use was that written training materials would be less effective than hands-on training in teaching recipients to use the EBT system. We expected this to be a distinguishing factor in the training offered by the waiver and nonwaiver States. As discussed in chapter 3, many recipients in the waiver States received some form of in-person training, and many recipients in the nonwaiver States received written instructions. Thus, the comparison of waiver-State to nonwaiver-State results does not address the hypothesis. In a separate analysis, we tested this hypothesis by regressing whether survey respondents had problems remembering their PINs against a number of variables, including two binary variables indicating in-person training and use of written materials (as those terms were defined in chapter 3).<sup>29</sup> The results were inconclusive. In two States, Louisiana and Minnesota, the existence of in-person training was correlated with fewer problems remembering the PIN, but the estimated coefficients were not significant in Alabama and Pennsylvania. Furthermore, in Pennsylvania, written materials appeared

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<sup>27</sup>To avoid confusion in the tables, only significance tests of differences between States are shown in the table. Tests of differences between vulnerable and nonvulnerable recipients will be discussed in the text.

<sup>28</sup>Survey respondents who were using a replacement EBT card were not asked how they obtained their **initial** card. For this reason, approximately 15 percent of Minnesota respondents did not indicate how they received their initial card. The tables therefore provide statistics on the overall Minnesota sample rather than breaking results out by method of card issuance and PIN designation. When an outcome in Minnesota varies substantially by method of card issuance, these results will be noted in footnotes.

<sup>29</sup>The covariates included in the regression models were described in footnote 4 of chapter 2. They include whether the recipient was elderly, disabled, or male; shopped less than once a month; received cash assistance benefits as well as food stamps; had ever used a bank card to get cash; had received in-person EBT training; or had learned about EBT through written materials.

to be more effective than in-person training, rather than less so, in reducing the incidence of PIN problems.

Similar analyses were conducted on PIN-use problems described later in this chapter and on system-use problems described in chapter 5. The analyses again were inconclusive; there is no consistent evidence that in-person training was either more or less effective than written materials in training new food stamp recipients to use EBT.

### Key Entry of Incorrect PIN

More people in the two waiver States (28.3 percent) than the two nonwaiver States (19.9 percent) said that they had ever entered a wrong PIN when using their EBT cards (table 36). The difference of 8.4 percentage points is statistically significant at the 0.01 level and is again large; the prevalence of this particular problem is 42 percent higher in the waiver States than in the nonwaiver States. In contrast, the 1.3 percentage point differences between the two waiver States and two nonwaiver States are small and not statistically significant.<sup>30</sup>

**Table 36—New entrants who had ever entered a wrong PIN**

Respondent group	Total waiver	Total non-waiver	Waiver States		Nonwaiver States	
			Alabama	Minnesota	Louisiana	Pennsylvania
All new entrants (percent)	28.3	19.9**	28.7	27.4	19.1	20.4
Sample size (number)	872	743	539	333	386	357
Vulnerable new entrants (percent)	29.9	15.8**	24.8	35.0	13.2	18.3
Sample size (number)	249	267	183	66	132	135
Nonvulnerable new entrants (percent)	27.7	20.5*	29.6	25.7	20.1	20.9
Sample size (number)	623	476	356	267	254	222

Note: Table entries are based on responses to Question D4 of the Survey of New EBT Users.

†Difference between this and the entry immediately to the left is significant at the 0.10 level.

\*Difference between this and the entry immediately to the left is significant at the 0.05 level.

\*\*Difference between this and the entry immediately to the left is significant at the 0.01 level.

Vulnerable recipients in the two waiver States were more likely to have entered a wrong PIN than those in the nonwaiver States (29.9 vs. 15.8 percent), and the same pattern holds for nonvulnerable recipients (27.7 vs. 20.5 percent). There are, however, no significant differences between the vulnerable and nonvulnerable subgroups with respect to whether they had ever entered a wrong PIN.

From the detailed EBT transaction data provided by EBT vendors to FNS, we have corroborative data on the percentage of food stamp recipients who entered at least one incorrect PIN during November and December 1999. Table 37 shows that an average of 25.3 percent of all new food stamp entrants in Alabama and Minnesota had at least one invalid PIN transaction during those

<sup>30</sup>In Minnesota, 27.4 percent of respondents said that they had at some time entered a wrong PIN. Among those who had picked up their EBT card at the office and selected their PIN, the percentage was only 17.4 percent, whereas it was 31.5 percent for those recipients who received their card in the mail.

**Table 37—Cases with at least one invalid PIN transaction over a 2-month period**

Cases	Total waiver	Total non-waiver	Waiver States		Nonwaiver States	
			Alabama	Minnesota	Louisiana	Pennsylvania
<i>Percent</i>						
All new entrants	25.3	22.4	27.2	23.4	25.5	19.3
Vulnerable new entrants	29.9	22.2	28.4	31.4	24.3	20.1
Nonvulnerable new entrants	24.7	22.7	26.8	22.5	26.2	19.2
Existing cases	22.1	23.1	22.2	21.9	25.5	20.6
Vulnerable existing cases	20.7	22.1	21.8	19.6	24.3	20.0
Nonvulnerable existing cases	22.8	23.6	22.5	23.2	26.2	21.1
<i>Number</i>						
Total EBT accounts	257,462	603,639	169,245	88,217	216,578	387,061

Notes: Table entries are based on EBT transaction data from November and December 1999. “Vulnerable” cases are here defined as elderly recipients or those listed on State eligibility files as having a disability. Because of an artifact of the EBT transaction data available for analysis, the number of invalid PIN transactions in Alabama, Minnesota, and Louisiana is overstated relative to the number in Pennsylvania. The Pennsylvania data should not be directly compared with data from the other States. See text for further explanation. No significance tests were performed because the data do not represent a sample.

and December 1999. Table 37 shows that an average of 25.3 percent of all new food stamp entrants in Alabama and Minnesota had at least one invalid PIN transaction during those 2 months, compared with 22.4 percent of new entrants in the nonwaiver States of Louisiana and Pennsylvania. The biggest difference between the survey and EBT data, for all new entrants, is in Louisiana, where the survey data indicate much lower percentages of new recipients who had ever entered a wrong PIN than do the EBT data.

The EBT transaction data in table 37 indicate that vulnerable new recipients in the waiver States are more likely to have had an invalid PIN transaction than nonvulnerable new recipients in those States, especially in Minnesota. In the nonwaiver States, however, the percentages are very close or are even, as in Louisiana, reversed. Thus, there is some evidence that the PIN selection waiver may have a disproportionate effect on vulnerable new recipients. We note, however, that the definition of “vulnerable” differs for tables 36 and 37. As discussed in chapter 2, we used sampled recipients’ self-reporting of a disability to define vulnerability. For the EBT transaction data, however, no survey data are available, and we used information on the State food stamp eligibility files to identify disabled recipients.

The EBT transaction data may also be used to investigate whether there is a “learning effect” with respect to PIN problems. In the two waiver States, the percentages of new entrants with at least one invalid PIN transaction are higher than those for existing cases, although the difference in Minnesota is quite small (23.4 vs. 21.9 percent). In addition, vulnerable new recipients in the waiver States are more likely to have had an invalid PIN transaction than vulnerable recipients in the existing caseload. In the nonwaiver States, however, there is no evidence of a learning effect, either overall or for the vulnerable and nonvulnerable subgroups. Indeed, perhaps the most striking result in table 37 is that, even among existing cases, from 21 to 26 percent of the caseload had at least one invalid PIN transaction over a 2-month period. This finding strongly suggests that

a sizable portion of invalid PIN transactions may arise from key-entry rather than memory problems.

There is a limitation to the EBT transaction data in table 37. At least part, if not all, of the difference between the figures presented for Pennsylvania and the figures for the other three States is an artifact of the available data. Information on invalid PIN transactions in Pennsylvania comes directly from the ALERT files provided by Pennsylvania’s EBT vendor, Citibank, to FNS and is limited to POS transactions for accessing a food stamp account. The ALERT files from the other States were supplemented by data provided by their EBT vendor, eFunds Corporation, and the supplemental data on counts of invalid PIN transactions included all invalid PIN transactions, whether at a POS terminal or an ATM. Thus, the figures in table 37 are overstated for Alabama, Minnesota, and Louisiana in considering just the food stamp transactions of recipients. It is still entirely appropriate, however, to compare percentage figures among recipient subgroups within a single State.

Table 38 shows that even though a sizable percentage of food stamp recipients may enter an invalid PIN occasionally, the percentage of all transactions involving an invalid PIN entry is smaller, though still substantial. Bearing in mind the data problem, explained above, that overstates the prevalence of invalid PIN transactions in Alabama, Minnesota, and Louisiana relative to Pennsylvania, in table 38 these transactions generally total from 3 to 9 percent. Indeed, the figures for Pennsylvania are similar to the numbers presented in figure 1 earlier in this chapter, where monthly statistics on invalid PIN transactions were not available for Pennsylvania.

**Table 38—Transactions in a 2-month period with invalid PINs**

Type of case	Total waiver	Total non-waiver	Waiver States		Nonwaiver States	
			Alabama	Minnesota	Louisiana	Pennsylvania
			<i>Percent</i>			
All new entrants	6.7	4.0	6.2	7.1	4.9	3.1
Vulnerable new entrants	12.4	5.7	9.3	15.5	7.4	4.0
Nonvulnerable new entrants	6.0	3.8	5.6	6.5	4.7	2.9
Existing cases	5.5	3.7	5.4	5.7	5.1	2.3
Vulnerable existing cases	7.9	5.0	7.8	8.0	7.0	3.0
Nonvulnerable existing cases	4.7	3.2	4.4	5.0	4.5	1.9
Total transactions	3,480	9,239	2,391	1,089	3,786	5,453

Notes: Table entries are based on EBT transaction data from November and December 1999. “Vulnerable” cases are here defined as elderly recipients or those listed on State eligibility files as having a disability.

Because of an artifact of the EBT transaction data available for analysis, the number of invalid PIN transactions in Alabama, Minnesota, and Louisiana is overstated relative to the number in Pennsylvania. The Pennsylvania data should not be directly compared with data from the other States. See text for further explanation.

No significance tests were performed because the data do not represent a sample.

The data in table 38 provide additional evidence that vulnerable recipients—both new entrants and existing cases—may have more difficulties with invalid PIN entries than nonvulnerable recipients. Furthermore, because the prevalence of invalid PIN transactions is generally somewhat higher for new entrants than for existing cases, we have some evidence for a small learning effect with regard to PIN entry.

## PIN Problems That Prevent Card Use

Some instances of incorrect PIN entry may be due to simple misentry of the PIN digits rather than trouble remembering the PIN, as the results for existing cases in table 38 suggest. In that instance, the recipient could simply reenter the PIN to complete the EBT transaction. If a memory problem causes an invalid PIN to be entered, however, the recipient might try to complete the transaction by trying another possible PIN code or by referring to a written reminder of the PIN. Recipients who cannot remember their PINs may leave the food store without using their EBT benefits to pay for groceries. If they keep entering an incorrect PIN, the system in the nonwaiver States will “lock out” their EBT cards after three consecutive tries; in the waiver States the lock-out occurs after four consecutive wrong entries. Recipients with locked-out cards—depending on State policy—must go to their local food stamp office to have the card “unlocked,” either by selecting a new PIN or by remembering their old one, or must call customer service for a new PIN.

The survey asked specifically whether problems remembering the PIN ever prevented the recipient from using his or her card. We believe that a “Yes” answer to this question can be interpreted as indicating a serious problem for the recipient, because food stamp benefits could not be used to purchase groceries.

As shown in table 39, 7.1 percent of new EBT card users in the waiver States said that a PIN problem had prevented them from using their card at least once, compared with 2.9 percent of new recipients in the nonwaiver States. The 4.2 percentage point difference is statistically significant at the 0.01 level. The second and third rows of the table show that a greater percentage of both vulnerable (9.0 percent) and nonvulnerable (6.2 percent) recipients in the waiver States than in the nonwaiver States (3.3 and 2.7 percent, respectively) were prevented from using their cards by a PIN problem. The respective differences are statistically significant at the 0.05 and 0.01 levels.

**Table 39—New entrants reporting that a PIN problem had prevented card use**

Respondent group	Total waiver	Total non-waiver	Waiver States		Nonwaiver States	
			Alabama	Minnesota	Louisiana	Pennsylvania
All new entrants (percent)	7.1	2.9	7.6	5.9	2.2	3.4
Sample size (number)	880	749	543	337	387	362
Vulnerable new entrants (percent)	9.0	3.3*	6.6	11.5	2.0	4.5
Sample size (number)	254	270	187	67	133	137
Nonvulnerable new entrants (percent)	6.2	2.7**	7.8	4.6	2.2	3.2
Sample size (number)	626	479	356	270	254	225

Note: Table entries are based on responses to Question D5 of the Survey of New EBT Users.

†Difference between this and the entry immediately to the left is significant at the 0.10 level.

\*Difference between this and the entry immediately to the left is significant at the 0.05 level.

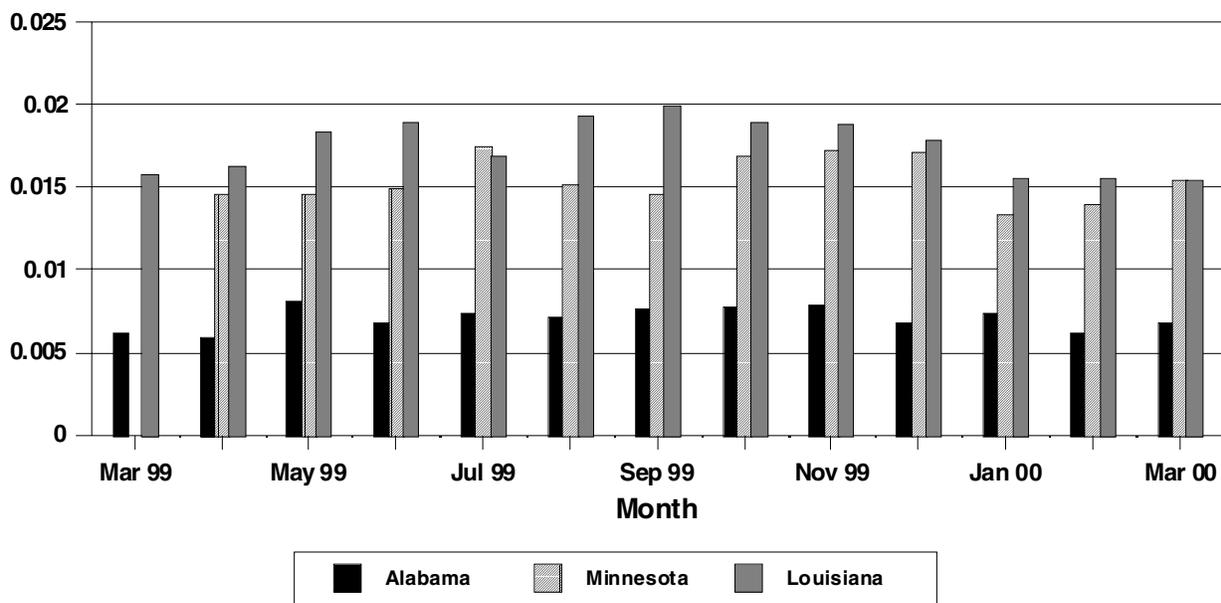
\*\*Difference between this and the entry immediately to the left is significant at the 0.01 level.

In Minnesota, vulnerable recipients appear to have been more likely than nonvulnerable ones to report a PIN problem that prevented card use. None of the vulnerable/nonvulnerable comparisons in table 39, however, show statistical significance.<sup>31</sup>

In one State, Pennsylvania, the study has enough information on invalid PIN entries to identify when three consecutive transactions are rejected for this reason. During November and December 1999, 1.1 percent of all active food stamp cases there experienced three consecutive invalid PIN transactions and presumably had to go to their local offices before using the cards again. Although this percentage is small, it does represent nearly 2,000 instances per month. The rate for new food stamp cases was 1.9 percent, compared with 1.1 percent for users with more EBT experience, so there is some evidence here as well of a learning curve in remembering one's PIN.

More-limited information on card lockouts from consecutive invalid PIN entries is available for Alabama, Minnesota, and Louisiana. Figure 2, based on the monthly EBT summary statistics, shows the average number of transactions denied for card lockout per case. Although the rates for Minnesota and Louisiana are higher than for Alabama, all are fairly low. Minnesota and Louisiana numbers reflect an average of about 14 to 20 recipients per 1,000 cases experiencing a card lockout each month. Again, there are some data limitations; lockout transactions in figure 2 include cash transactions at POS terminals and ATMs, as well as food stamp transactions at POS terminals. Further, for the nonwaiver State of Louisiana (and for Pennsylvania), a transaction is denied by card lockout **after** three consecutive invalid PIN entries, that is, on the fourth attempt). If a recipient gave up after three invalid PIN entries, a denial from card lockout would not be observed. In the waiver States of Alabama and Minnesota, a transaction is denied by reason of card lockout only after four consecutive invalid PIN entries (that is, on the fifth try).

Figure 2  
Ratio of denials for excessive PIN tries to food stamp cases



<sup>31</sup>In Minnesota, there were no significant differences in frequency of PIN problems preventing card use between recipients who received their EBT cards in the mail or at the office.

Data on excessive PIN tries are not available for Pennsylvania, and they are missing for Minnesota in March 1999.

The rates in figure 2 and the previously presented statistic for Pennsylvania are all much lower than the survey results in table 39. That is, many more survey respondents said that PIN problems had prevented card use than is suggested by the EBT data. Several factors can narrow this apparent discrepancy. First, the survey involved only new food stamp recipients, whereas the rates in table 39 are for each State's entire EBT caseload. Second, the survey, which was conducted between January and April of 2000, asked new recipients whether PIN problems had **ever** prevented card use. The survey respondents received their first EBT cards in the October-to-December 1999 period, so most survey responses are for a period lasting much longer than one month, which would cause the survey responses to be higher. Finally, some recipients, realizing that they could not remember their PINs, may have given up trying to use their EBT cards before having three or four consecutive invalid PIN entries. To the extent this may have happened, it, too, would lead to higher reported rates of problems in the survey than were observed in the EBT data. The important points seem to be that (1) PIN problems kept more new recipients in the waiver States from using their cards than in the nonwaiver States, and (2) there is no consistent evidence that vulnerable new recipients had more difficulties than nonvulnerable new recipients.

There is one other factor to consider when interpreting rates of PIN problems and lockouts revealed in EBT transaction data: an unknown portion of the problems may be due to unauthorized use of a lost or stolen card, with the cardholder trying to guess the recipient's PIN. That is, the EBT data probably overstate the level of problems that recipients themselves have, because some of the lockouts represent attempted card use by unauthorized persons.<sup>32</sup> This issue does not arise in the survey results, because the survey asked respondents directly about possible PIN problems that they encountered.

Both the survey and EBT data examined thus far suggest that food stamp recipients in the waiver States are more likely to experience PIN problems than those in the nonwaiver States. Can this be attributed to differences in attempted unauthorized use of lost or stolen EBT cards? Probably not. Evidence presented later (in chapter 6) indicates that recipients in the waiver States are not more likely to report a card as lost, stolen, or damaged than in nonwaiver States. Furthermore, when replacement cards are needed, the distributions of reasons for card replacement are similar among States. That is, one does not see a higher relative frequency of lost and stolen cards in the waiver States.

To the extent that unauthorized card use does contribute to the levels of PIN problems observed in the EBT data, we note that this exacerbates the difficulty discussed earlier in reconciling results from the survey and EBT data. The survey data indicate more PIN problems preventing card use than do the EBT data. If some of the problems observed in the EBT data arise from attempts at unauthorized card use, then the discrepancy between the survey data and EBT data becomes even greater.

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<sup>32</sup>We thank program officials in Alabama for bringing this issue to our attention.

## Calls to Customer Service about PINs

The survey asked recipients whether they had ever needed to call customer service or the EBT help desk to inquire about their PINs. We do not know what prompted the calls, but new food stamp recipients in the waiver States were about three times more likely (20.9 percent vs. 6.7 percent) to have called customer service about their PINs than new recipients in the nonwaiver States (table 40). Similar results obtain for both vulnerable or nonvulnerable recipients. In contrast to earlier questions about PIN problems, however, the differences between the Alabama and Minnesota results are large and statistically significant. Recipients in Alabama were much more likely to have called customer service about their PINs than recipients in any other State. It is the experience of the Alabama recipients that drives the difference between the waiver and nonwaiver States.<sup>33</sup>

**Table 40—New entrants who had called customer service about their PINs**

Respondent group	Total	Total	Waiver States		Nonwaiver States	
	Waiver	nonwaiver	Alabama	Minnesota	Louisiana	Pennsylvania
All new entrants (percent)	20.9	6.7**	31.9	9.9**	7.8	5.6
Sample size (number)	877	750	542	335	387	363
Vulnerable new entrants (percent)	18.4	6.8*	24.2	12.6*	9.9	3.7
Sample size (number)	253	271	187	66	133	138
Nonvulnerable new entrants (percent)	21.5	6.7**	33.9	9.2**	7.5	6.0
Sample size (number)	624	479	355	269	254	225

Note: Table entries are based on responses to question C5\_3 of the Survey of New EBT Users.

†Difference between this and the entry immediately to the left is significant at the 0.10 level.

\*Difference between this and the entry immediately to the left is significant at the 0.05 level.

\*\*Difference between this and the entry immediately to the left is significant at the 0.01 level.

We will see later in this chapter that food stamp recipients in Alabama were much more proactive about calling customer service and changing their PINs than recipients in the other States, and this may explain why the Alabama percentages in table 40 are so high. It is also possible that recipients in Alabama and Minnesota may have been calling customer service to ask when the mailed PINs were going to arrive. The data are not sufficiently detailed to tell us why these calls were made.

The summary statistics on EBT operations corroborate the survey findings on calls to customer service. Figure 3 shows PIN-related calls to customer service as a percentage of all calls.<sup>34</sup> Even though the actual ratios and percentages in figure 3 are not comparable with the survey results (because they are based on the entire EBT caseload in each State rather than just new EBT card users), Alabama stands out as having a much higher incidence of PIN-related calls than any of the other three States. This difference may be due to the policies the four States implemented for

<sup>33</sup> Although the percentage of Minnesota recipients who called customer service was higher among those who received their cards by mail rather than in the office (11.7 and 4.9 percent, respectively), the 11.7 percent figure is much lower than the 31.9 percent of recipients in Alabama who called customer service to inquire about their PINs.

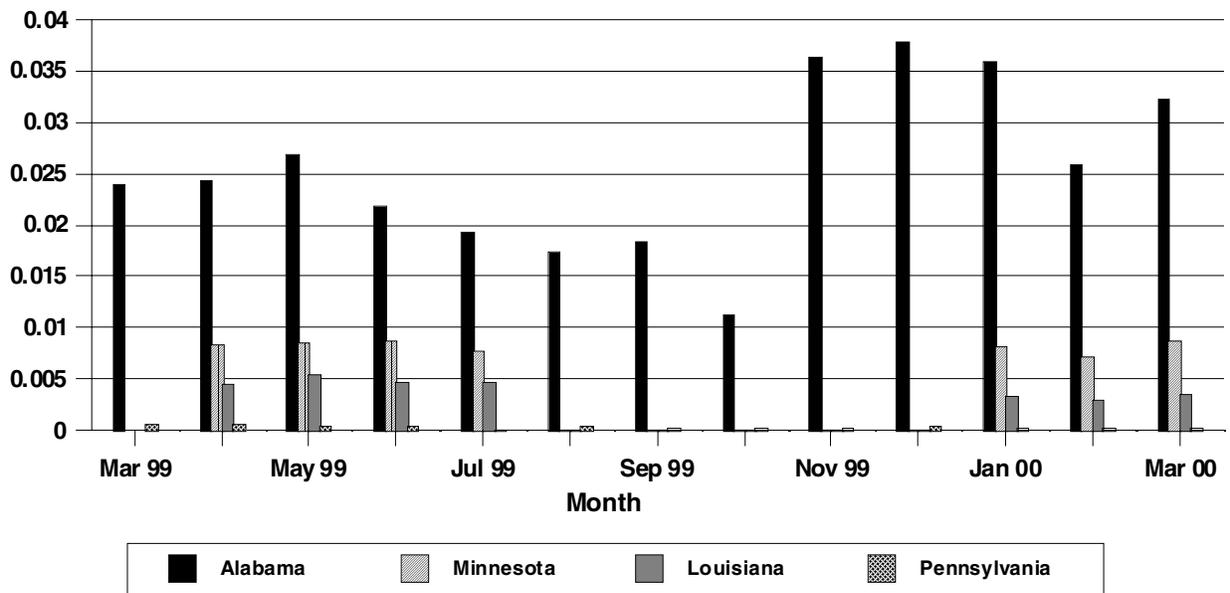
<sup>34</sup> The very low rate of PIN-related calls for Minnesota and Louisiana in August through December 1999 is probably a reporting anomaly. Customer service desks sometimes change how they classify incoming calls. Differences in how customer service operations classify calls may explain part of the large difference between the prevalence of PIN-related calls in Pennsylvania (served by Citibank's EBT help desk) and the other three States (served by eFund's EBT help desk), but policy differences also exist (see text).

changing a PIN. In the nonwaiver States of Louisiana and Pennsylvania, recipients are supposed to go to the local welfare office to select a new PIN. In Minnesota, they go to the local welfare office if they live in an area that had high mail loss under the previous food stamp coupon issuance system, and they call customer service to change their PINs if they live elsewhere. In Alabama, all recipients are supposed to call customer service to change their PINs.

Data on PIN-related calls are not available for Louisiana and Minnesota in March 1999. Ratios in some other months were zero, or so low that they do not show on the graph.

Figure 3

**Ratio of PIN-related calls to total number of cases**



## Changing One's PIN

The survey asked new food stamp recipients a series of questions about whether they had ever requested a new PIN and, if not, if they were aware they could and knew how to do it. These questions were designed to address two research questions. First, were recipients whose PINs had been assigned more likely to request a new PIN (which might be easier to remember) than those who had selected their initial PIN? Second, was the training in each State effective in explaining to new EBT card users that they could select a new PIN at any time and how to do so?

Table 41 shows the percentage of new entrants in each State who said they had requested a new PIN: 13.1 percent of recipients in the waiver States vs. 4.4 percent in the nonwaiver States. The 8.7 percentage point difference is statistically significant at the 0.01 level. This waiver/nonwaiver difference arises because of the actions of new recipients in Alabama, where 18.5 percent of them had requested a new PIN, compared with only 7.7 percent in Minnesota.<sup>35</sup> Clearly, a sizable percentage of new food stamp recipients in Alabama chose to select a new PIN after the EBT vendor mailed an assigned PIN to them. These relationships hold within the vulnerable and nonvulnerable groups as well.

**Table 41—New entrants reporting they had requested a new PIN**

Respondents	Total waiver	Total non-waiver	Waiver States		Nonwaiver States	
			Alabama	Minnesota	Louisiana	Pennsylvania
All new entrants (percent)	13.1	4.4**	18.5	7.7**	5.8	3.1
Sample size (number)	876	750	543	333	387	363
Vulnerable new entrants (percent)	10.7	1.7**	14.3	7.2	0.6	2.8†
Sample size (number)	253	271	187	66	133	138
Nonvulnerable new entrants (percent)	13.7	4.9**	19.5	7.8**	6.7	3.1
Sample size (number)	623	479	356	267	254	225

Note: Table entries are based on responses to Question D6 of the Survey of New EBT Users.

†Difference between this and the entry immediately to the left is significant at the 0.10 percent level.

\*Difference between this and the entry immediately to the left is significant at the 0.05 percent level.

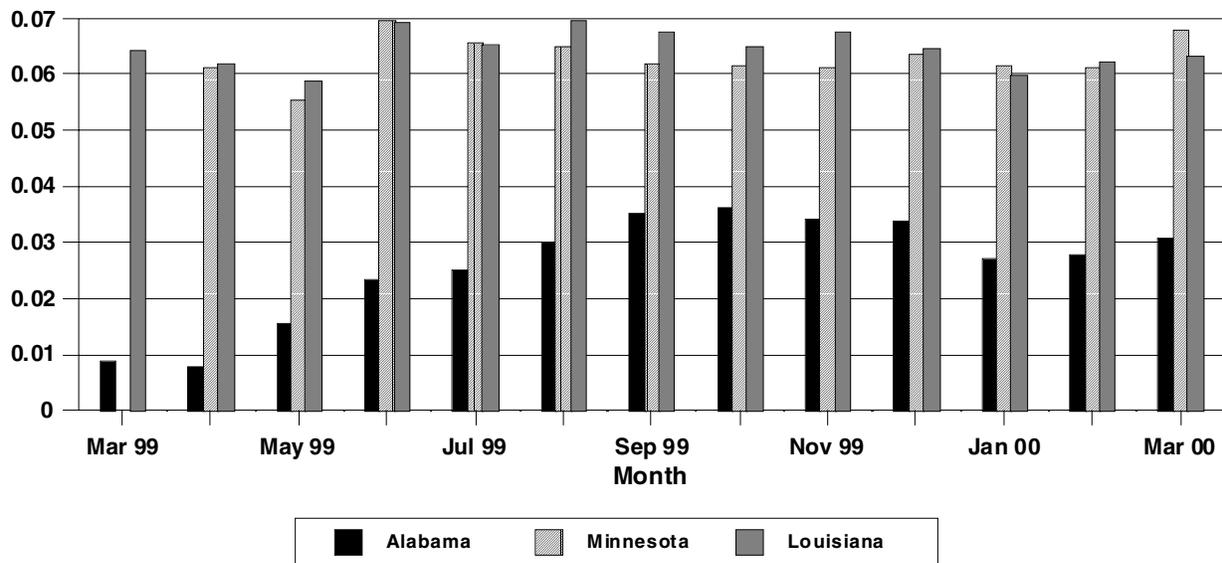
\*\*Difference between this and the entry immediately to the left is significant at the 0.01 percent level.

Somewhat surprisingly, table 41 shows that when vulnerable and nonvulnerable recipients are compared, it is the nonvulnerable ones who are more likely to request a new PIN. In Louisiana, the 6.1 percentage point difference is statistically significant at the 0.01 level. The 3.2 percentage point difference for the nonwaiver States as a group is statistically significant at the 0.05 level. The other differences are not statistically significant but are all in the same direction, with nonvulnerable recipients more likely to request a new PIN. It may be that some of the vulnerable recipients, a group that has greater problems remembering PINs, also find it difficult to request a new PIN.

<sup>35</sup> Among Minnesota recipients who received their EBT cards in the mail, 7.1 percent reported that they had ever requested a new PIN, compared with 4.1 percent of Minnesota recipients who received their cards and selected their PINs at the office. Recall that these figures do not include recipients using replacement cards.

Figure 4 displays information about PIN changes available from the monthly EBT summary statistics.<sup>36</sup> The Louisiana and Minnesota data in figure 4 are similar to the survey responses in Table 41, despite the fact that the results in the figure pertain to each State’s entire caseload rather than just to new entrants. In contrast, the results for Alabama in the table and the figure appear contradictory. The survey results indicate that, among the four States, Alabama recipients were the most likely to request a new PIN, at least among the three States whose summary statistics provided information on the frequency of PIN changes. The only way to reconcile these disparate findings is if nearly all the requests for a new PIN in Alabama are from new entrants, whereas requests for a new PIN in Minnesota and Louisiana are more evenly distributed between new and existing cases.

Figure 4  
Ratio of PIN changes to total cases



Note: Data on PIN changes are not available for Pennsylvania, and they were missing for Minnesota in March 1999.

This situation is certainly possible, especially given card and PIN issuance policies in Alabama. In Alabama, recipients may call customer service to select their own PINs as soon as they receive their EBT cards in the mail, even before they receive the separately mailed PIN. Thus, the relatively high rate of requests for new PINs among new food stamp recipients in Alabama may reflect a desire to shop with their cards as soon as possible rather than a need for a more easily remembered PIN.

The situation in which all requests in Alabama were from new entrants would also be possible if Alabama was more likely to explain PIN-change procedures during training. The survey data indicate, however, that there are no significant differences among the four States in the percentage of new food stamp recipients who were aware that they could request a new PIN (table 42). None of the between-State differences is statistically significant. Table 42 also shows that nonvulnerable

<sup>36</sup>The EBT transaction data provided to FNS do not include records indicating PIN changes, so we cannot use the detailed EBT data to investigate PIN changes.

recipients were more likely to be aware that they could request a new PIN than vulnerable recipients, which is consistent with the previous finding that nonvulnerable recipients were more likely to have actually requested a new PIN. All of the differences between the vulnerable and nonvulnerable groups in table 42 are statistically significant.

**Table 42—New entrants aware that they could request a new PIN**

Respondent group	Total waiver	Total non-waiver	Waiver States		Nonwaiver States	
			Alabama	Minnesota	Louisiana	Pennsylvania
All new entrants (percent)	69.2	71.5	70.7	67.7	70.5	72.6
Sample size (number)	874	735	542	332	376	359
Vulnerable new entrants (percent)	59.6	56.8	60.6	58.4	57.1	56.6
Sample size (number)	253	261	186	67	126	135
Nonvulnerable new entrants (percent)	71.5	74.5	73.2	69.9	72.5	76.6
Sample size (number)	621	474	356	265	250	224

Note: Table entries are based on responses to Questions D6 and D7 of the Survey of New EBT Users. Those recipients who were aware that they could request a new PIN include those who answered “yes” to Question D7 and those who had already requested a new PIN.

†Difference between this and the entry immediately to the left is significant at the 0.10 level.

\*Difference between this and the entry immediately to the left is significant at the 0.05 level.

\*\*Difference between this and the entry immediately to the left is significant at the 0.01 level.

Unfortunately, the above results present a conundrum. It appears that Alabama’s policy of allowing PIN changes immediately after card receipt could explain the relatively large percentage of new food stamp recipients in Alabama who request a new PIN. If this is happening, however, then one would expect to see fewer PIN problems in Alabama than elsewhere. Findings presented earlier in the chapter do not bear this out, because rates of PIN-related problems in Alabama are relatively high compared with the nonwaiver States. Furthermore, in a separate analysis we broke out the rates of PIN problems (in each State) by whether a new PIN had been requested. This analysis showed that requests for new PINs were more likely among recipients having PIN problems than among those without PIN problems. This leads us to believe that most PIN-change requests are made after a recipient experiences a problem, not immediately after card receipt.<sup>37</sup> It is still possible, of course, that Alabama recipients receive the new card and, in a separate mailing, their assigned PIN. They then experience PIN problems and request a new PIN, leaving a low level of residual demand for new PINs among recipients who have been in the program for some time. This scenario would match both the survey data on new recipients and the summary EBT statistics for all food stamp cases.

Table 43 is the last exhibit dealing with PIN changes; it shows the percentage of new entrants who either had already requested a new PIN or said they knew how to request one. There are no significant differences between recipients in the waiver and the nonwaiver States—about half the survey respondents knew how to request a new PIN. The absence of a significant difference is a bit surprising, especially because nonwaiver-State recipients—who were able to select their own PINs—would presumably have less of an incentive to remember how to request a new PIN.

<sup>37</sup>The survey did not collect information of sufficient detail to determine whether PIN problems preceded or came after the request for a new PIN.

Nevertheless, this lack of a significant difference between the waiver and nonwaiver States is consistent with the results in table 42.<sup>38</sup>

**Table 43—New entrants reporting that they know how to request a new PIN**

Respondent group	Total Waiver	Total non-waiver	Waiver States		Nonwaiver States	
			Alabama	Minnesota	Louisiana	Pennsylvania
All new entrants (percent)	53.8	51.9	58.2	49.4*	54.1	49.8
Sample size	869	724	540	329	372	352
Vulnerable new entrants (percent)	47.0	43.9	46.2	47.9	48.7	39.0
Sample size	251	257	185	66	125	132
Nonvulnerable new entrants (percent)	55.5	53.6	61.2	49.8**	54.9	52.4
Sample size	618	467	355	263	247	220

Note: Table entries are based on responses to Questions D6 and D7a of the Survey of New EBT Users.

†Difference between this and the entry immediately to the left is significant at the 0.10 level.

\*Difference between this and the entry immediately to the left is significant at the 0.05 level.

\*\*Difference between this and the entry immediately to the left is significant at the 0.01 level.

Table 43 does show that nonvulnerable new food stamp recipients in Alabama were more likely to know how to request a new PIN than were nonvulnerable recipients in Minnesota, the other State with the PIN selection waiver. Although there is no significant difference between the vulnerable recipients in Alabama and Minnesota, the size of the difference among the nonvulnerable recipients is large enough to create a statistically significant difference between all new food stamp entrants in the two States.

In each State, nonvulnerable food stamp recipients new to the program were more likely to know how to request a new PIN than were vulnerable recipients. The differences between the vulnerable and nonvulnerable groups are significant at the 0.01 level in Alabama and at the 0.10 level in Pennsylvania. They are significant at the 0.10 level in both the combined waiver State group and the combined nonwaiver State group.

<sup>38</sup>Minnesota recipients who received their initial EBT cards in the mail were somewhat more likely (67 vs. 62.6 percent) to know they could request a new PIN than were Minnesota recipients who picked up their EBT cards at the local office. They were also more likely (49.7 vs. 40.8 percent) to report that they knew how to request a PIN.

## PIN Security

Through written training materials and during actual training sessions, new food stamp recipients are told repeatedly to keep their PINs secret for card security purposes. If an EBT card is lost or stolen and the new cardholder knows the PIN, then the food stamp benefits can be used without the recipient's permission. The recipient is liable for unauthorized transactions prior to reporting a card lost or stolen, so the potential for losing benefits is high if the PIN is not safeguarded.

Recipients are told to select a PIN they can easily remember, but not that is not easily guessed by a friend or family member (such as a number based on one's birthdate). In letting recipients pick their own easy-to-remember code, the hope is that they can remember their PIN without having to write it down or tell it to someone. Picking an easily remembered PIN is not an option in the waiver States (unless recipients request a new PIN after the first one is assigned to them). Thus, there is some concern that recipients in those States may be more likely to write their PIN down or tell it to a family member than recipients in nonwaiver States. Similar concern exists for vulnerable recipients in both waiver and nonwaiver States, who may have memory problems.

The Survey of New EBT Users asked respondents two questions related to aids for remembering the PIN: whether they ever wrote their PIN somewhere to help them remember it; the and whether they ever told their PIN to somebody else.

In table 44, we see that new food stamp recipients in the waiver States were nearly twice as likely to write their PINs down as those in the nonwaiver States (26.7 vs. 15.2 percent). The 11.5 percentage point difference is statistically significant at the 0.01 level. Within the vulnerable and nonvulnerable subgroups, only the difference between waiver and nonwaiver States for the nonvulnerable recipients (24.9 vs. 13.1 percent) is statistically significant.<sup>39</sup>

**Table 44—New entrants who wrote their PIN down to help them remember it**

Respondent group	Total waiver	Total non-waiver	Waiver States		Nonwaiver States	
			Alabama	Minnesota	Louisiana	Pennsylvania
All new entrants (percent)	26.7	15.2**	28.7	24.8	16.5	13.9
Sample size (number)	880	750	545	335	387	363
Vulnerable new entrants (percent)	34.9	26.0	33.8	36.0	30.5	21.5
Sample size (number)	253	271	188	65	133	138
Nonvulnerable new entrants (percent)	24.9	13.1**	27.5	22.3	14.2	12.0
Sample size (number)	627	479	357	270	254	225

Note: Table entries are based on responses to Question D2 of the Survey of New EBT Users.

†Difference between this and the entry immediately to the left is significant at the 0.10 level.

\*Difference between this and the entry immediately to the left is significant at the 0.05 level.

\*\*Difference between this and the entry immediately to the left is significant at the 0.01 level.

<sup>39</sup> Additional evidence concerning who is likely to write down a PIN comes from examining recipients in Minnesota, where 37.4 percent of those receiving a mailed card and assigned PIN wrote the PIN down. Only 12.4 percent of Minnesota recipients getting their cards at the office and selecting their own PIN indicated that they wrote the PIN down.

Table 44 also shows that vulnerable recipients are more likely to write down their PINs than nonvulnerable recipients. This is true both for the waiver States and the nonwaiver States, where the differences (34.9 vs. 24.9 percent and 26.0 vs. 13.1 percent, respectively) are statistically significant at the 0.05 level. It is also true for Minnesota and Louisiana, where the respective differences (36.0 vs. 22.3 percent and 30.5 vs. 14.2 percent) are significant at the 0.05 and 0.10 levels.

Of those recipients who wrote down their PIN, 64.5 percent across the four States said they kept the written PIN with their EBT card or in their wallet or purse. The percentages in the waiver States of Alabama and Minnesota were lower than in Louisiana and Pennsylvania, but even in the waiver States the percentages exceeded 50 percent. Keeping a written PIN close to one's EBT card clearly risks the security of the EBT benefits; with the PIN a lost or stolen card can easily be used to purchase groceries or, for recipients with cash benefits, to withdraw cash.

Table 45 presents information on the likelihood of recipients telling their PIN to somebody who could help them remember it later. Comparing tables 44 and 45 shows that new food stamp recipients in the waiver States were less likely to do this than to write it down, whereas in the nonwaiver States they were slightly more likely to tell their PIN than to write it. Seeing this pattern and recognizing that the two memory aids could be substitutes for each other, we examined the percentage of recipients who either wrote their PIN down or told it to somebody (table 46). Both overall and for the vulnerable and nonvulnerable groups, new recipients in the waiver States were more likely to use at least one of these memory aids than were new recipients in the nonwaiver States. The differences are statistically significant among nonvulnerable recipients and the overall caseload of new entrants. In looking at the State-specific percentages, we see that Alabama recipients stand out as being most likely to write their PIN down or tell it to somebody.<sup>40</sup>

**Table 45—New entrants who told somebody their PIN to help them remember it**

Respondent group	Total waiver	Total non-waiver	Waiver States		Nonwaiver States	
			Alabama	Minnesota	Louisiana	Pennsylvania
All new entrants (percent)	13.6	17.1	16.1	11.1*	18.9	15.3
Sample size (number)	880	749	544	336	387	362
Vulnerable new entrants (percent)	20.1	26.6	20.9	19.2	39.4	13.8**
Sample size (number)	253	270	187	66	133	137
Nonvulnerable new entrants (percent)	12.0	15.6	14.8	9.2*	15.6	15.7
Sample size (number)	627	479	357	270	254	225

Note: Table entries are based on responses to Question D3 of the Survey of New EBT Users.

‡Difference between this and the entry immediately to the left is significant at the 0.10 level.

\*Difference between this and the entry immediately to the left is significant at the 0.05 level.

\*\*Difference between this and the entry immediately to the left is significant at the 0.01 level.

<sup>40</sup> A high percentage (44.7 percent) of Minnesota recipients who received their cards in the mail also said they used at least one of the aids for remembering their PIN. Only 19.8 percent of recipients in Minnesota who picked up their cards said they told somebody their PIN or wrote it down.

**Table 46—New entrants who either told their PIN to somebody or wrote it down**

Respondent group	Total waiver	Total non-waiver	Waiver States		Nonwaiver States	
			Alabama	Minnesota	Louisiana	Pennsylvania
All new entrants (percent)	36.4	28.2**	40.7	32.1*	29.1	27.4
Sample size (number)	881	750	545	336	387	363
Vulnerable new entrants (percent)	47.3	39.1	49.8	44.8	44.9	33.2
Sample size (number)	254	271	188	66	133	138
Nonvulnerable new entrants (percent)	33.9	26.2*	38.5	29.2*	26.5	26.0
Sample size (number)	627	479	357	270	254	225

Note: Table entries are based on responses to Questions D2 and D3 of the Survey of New EBT Users.

†Difference between this and the entry immediately to the left is significant at the 0.10 level.

\*Difference between this and the entry immediately to the left is significant at the 0.05 level.

\*\*Difference between this and the entry immediately to the left is significant at the 0.01 level.

In every State except Pennsylvania, and for the grouped waiver and nonwaiver States, vulnerable recipients were significantly more likely to write their PIN down or tell it to somebody than nonvulnerable recipients. Within the combined waiver States, the 13.4 percentage point difference is statistically significant at the 0.01 level; the remaining differences (except for Pennsylvania) are all significant at the 0.05 level.

From the data on decisions to write down a PIN or to tell it to somebody for later help in remembering, it appears that recipients in the waiver States are at greater risk than those in the nonwaiver States of losing food stamp benefits through an unauthorized transaction. Similarly, vulnerable recipients may be at greater risk than nonvulnerable recipients. The survey explored this possibility by asking whether anybody had ever used the recipient's EBT card without permission to buy groceries or withdraw cash benefits. Overall, only 7 of the 1,632 survey respondents (0.5 percent) said that their EBT card had been used without permission, but 6 of the 7 were from the waiver States. Only two of the seven recipients reporting an unauthorized transaction were either elderly or disabled, but five of the six waiver-State recipients had either written their PIN down or told it to somebody to help them remember.<sup>41</sup>

Table 47 presents the percentage of new food stamp recipients reporting an unauthorized transaction. As shown in the table, the difference between the waiver and nonwaiver States in the percentage of new entrants reporting an unauthorized transaction is statistically significant at the 0.05 level. No other comparisons show a significant difference. The hypothesis regarding the linkage between poor PIN security and unauthorized transactions is supported by the survey data. Of the seven recipients reporting an unauthorized transaction, two said they had written the PIN down (although only one put the written PIN with the card), three said they had told the PIN to somebody, and three said the person who used the card without permission had used it previously with permission (and thus had access to the PIN). All seven recipients had compromised their PIN in one way or another.

<sup>41</sup>The seventh recipient with an unauthorized transaction did not give information regarding whether the PIN was written down or told to somebody.

**Table 47—New entrants reporting an unauthorized transaction**

Respondent group	Total waiver	Total non-waiver	Waiver States		Nonwaiver States	
			Alabama	Minnesota	Louisiana	Pennsylvania
All new entrants (percent)	0.7	0*	0.5	0.9	0	0.1
Sample size (number)	882	749	545	337	386	363
Vulnerable new entrants (percent)	1.7	0	0	3.4	0	0
Sample size (number)	255	271	188	67	133	138
Nonvulnerable new entrants (percent)	0.5	.1	.6	.4	0	0.1
Sample size (number)	627	478	357	270	253	225

Note: Table entries are based on responses to Question E6 of the Survey of New EBT Users.

†Difference between this and the entry immediately to the left is significant at the 0.10 level.

\*Difference between this and the entry immediately to the left is significant at the 0.05 level.

\*\*Difference between this and the entry immediately to the left is significant at the 0.01 level.